

# **Borden Institute**

## ***Textbooks of Military Medicine***



## **Office of The Surgeon General United States Army**

# Borden Institute - History



- In 1987, then-Colonel Russ Zajtchuk conceived the idea for a “Center of Excellence in Military Medical Research and Education,” under the US Army’s Office of The Surgeon General.
- The Center was then made a reality, largely through the efforts of Zajtchuk, Dr. Don Jenkins, and Dr. (then Colonel) Ron Bellamy.
- In 1992, in honor of LTC William Cline Borden, the Center’s name was changed to Borden Institute.
- Borden Institute is located at Walter Reed Army Medical Center, Delano Hall. Dr. Borden was MAJ Walter Reed’s personal physician.

# Borden Institute - TMM series



- To date, published nearly 20 volumes of the Textbooks of Military Medicine (TMM) series.
- Comprehensive reference books on the art and science of military medicine, extensively illustrated, and written in an easy-to-follow narrative.
- TMM series designed to illustrate how military medicine has:
  - Built on the lessons learned in past wars, and
  - Lays out the scientific basis on which the practice of military medicine is grounded.

# Borden Institute - TMM

## *Medical Consequences of Nuclear Warfare* 1989

### MEDICAL CONSEQUENCES OF NUCLEAR WARFARE

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1989*



The artist, Ken Nakagawa, witnessed rescue operations performed by Japanese naval personnel along a riverbank in Hiroshima on 6 August 1945. Approximately 280,000 deaths occurred as a consequence of this first atomic bombing. The reactions of other survivors are explored in Chapter 8.

Reprinted, by permission, from the Japanese Broadcasting Corporation (NHK). *Unforgettable fire: Pictures drawn by atomic bomb survivors*, 1st American ed., 90. New York: Pantheon Books, Random House, Inc., ©1961.

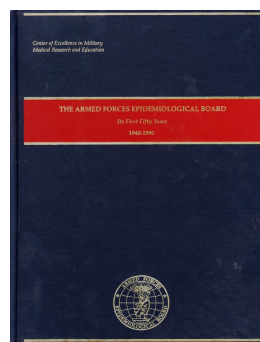


# Borden Institute

## *The Armed Forces Epidemiological Board - Its First Fifty Years: 1940- 1990*

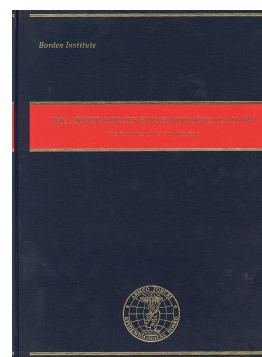
1990

## *The Armed Forces Epidemiological Board - The Histories of the Commissions*



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# Borden Institute - TMM

## ***Conventional Warfare: Ballistic, Blast, and Burn Injuries***

199

1

### CONVENTIONAL WARFARE BALLISTIC, BLAST, AND BURN INJURIES

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United States Army Institute for Surgical Research  
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1991



*Be slowly lifted up, thou long black arm,  
Great gun towering toward Heaven, about to curse*

—Lieutenant Wilfred Owen  
Royal Army  
Killed in action in France, 1916

American soldiers, members of the Third Field Artillery, stand by as an M-198 155-mm howitzer is fired during the multinational joint service exercise "Bright Star" in Gabel Mamza, Egypt, in 1985.



# Borden Institute - TMM

## *Occupational Health: The Soldier and the Industrial Base*

1993

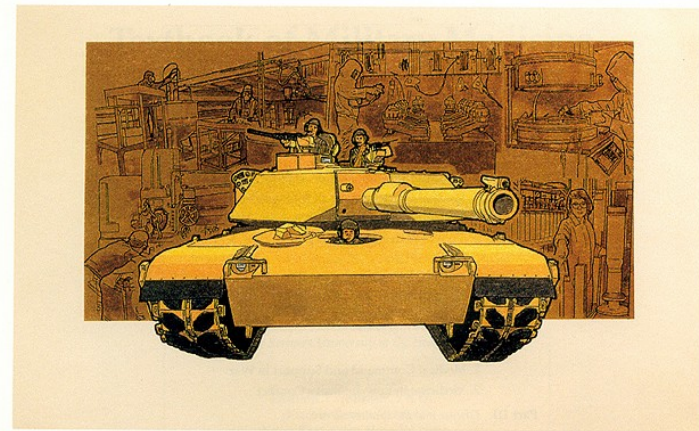
### OCCUPATIONAL HEALTH THE SOLDIER AND THE INDUSTRIAL BASE

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1993



The M1 Abrams tank shown above is surrounded by five of the many, oft-times forgotten, industrial operations that support this weapon system and the soldiers who operate it. Represented clockwise from the lower left corner are (1) heavy metal-parts machining, (2) explosives fabrication, (3) vehicle-components painting, (4) electronics fabrication, and (5) ammunition inspection.

# Borden Institute - TMM

## Military Dermatology

199  
4

### MILITARY DERMATOLOGY

Specialty Editor

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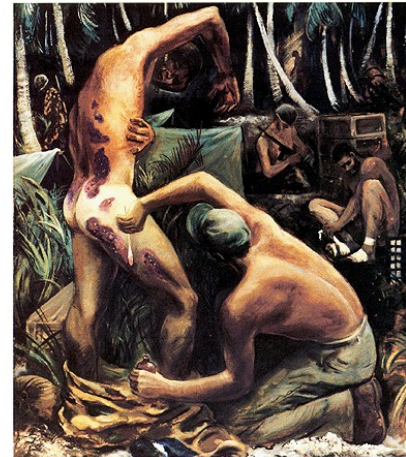
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Armed Forces Institute of Pathology  
Washington, D.C.

1994



This World War II scene painted by Franklin Botts, titled *Jungle—Ally of the Enemy*, exemplifies Major General Sir W. G. Macpherson's insight regarding the profound toll that dermatologic problems can take during wartime:

*Diseases of the skin ... are generally regarded as lesser maladies, that is to say, conditions which as a rule neither threaten life nor seriously impair health. For the individual this is true, but in the case of an army the collective results of such minor afflictions may become of high importance because, for military purposes, a man incapacitated for duty is a loss to the fighting force whatever the extent or cause of his personal disability.*

—Major-General Sir W. G. Macpherson, K.C.M.G., C.B., L.L.D.

<sup>1</sup>In: Macpherson WG, Horrocks WH, Beveridge WW, eds. *Medical Services. Hygiene of the War. In: History of the Great War: Vol. 1.* London, England: His Majesty's Stationery Office; 1923: 68.

Painting: Courtesy of the U.S. Army Center of Military History, Washington, D.C.



# Borden Institute - TMM

## *Military Psychiatry: Preparing in Peace for War*

199

4

### MILITARY PSYCHIATRY PREPARING IN PEACE FOR WAR

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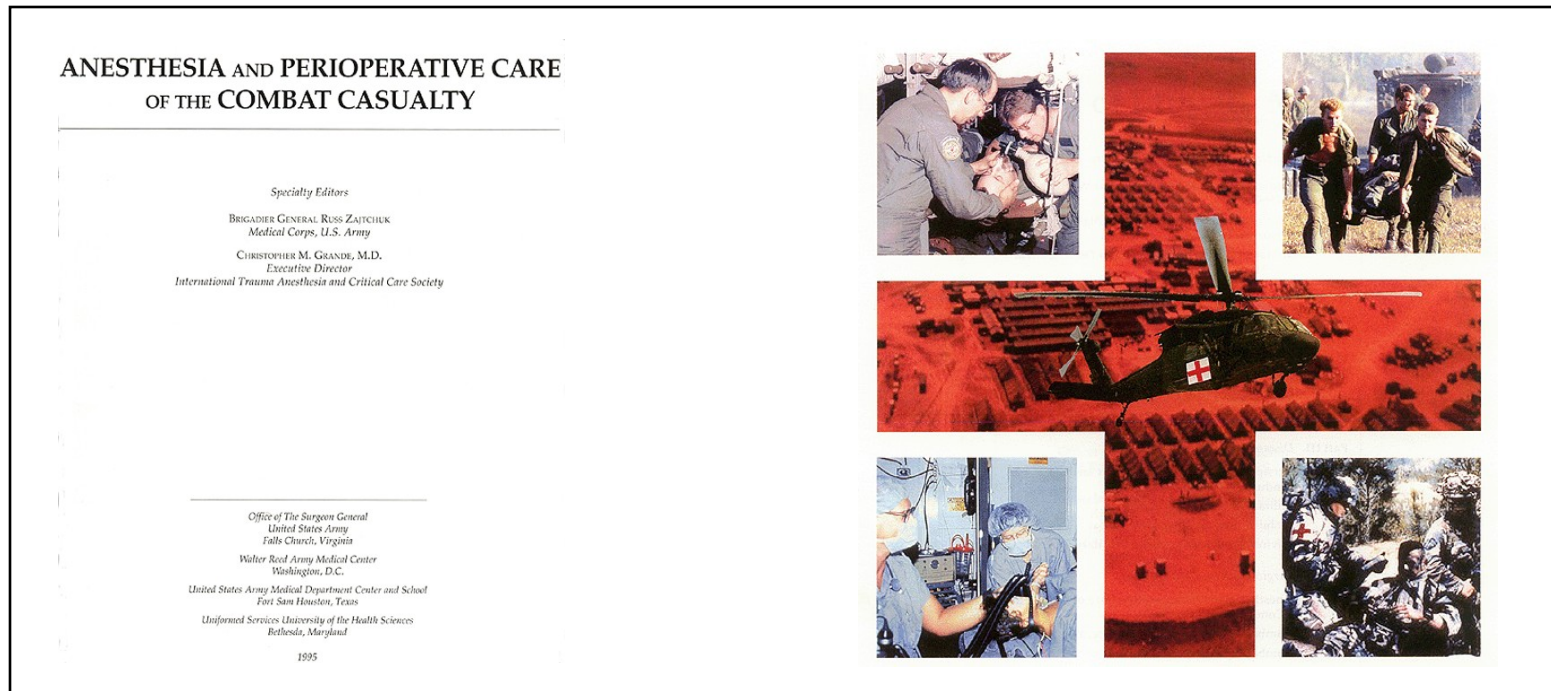
1994



This 1944 painting by Jack McMillen was commissioned by the U.S. government for Walter Reed Army Medical Center as part of the Works Projects Administration (WPA) artists' program of World War II. It illustrates the historical function of the Forest Glen annex of the Walter Reed Army Medical Center as a holding and rehabilitation unit for medical patients, including psychiatric patients, during World War II. This is a role the Forest Glen annex also played in subsequent wars. Psychiatric patients were identified, and to an extent stigmatized, by wearing maroon hospital clothing. For many years this painting was on display at the Forest Glen annex in Silver Spring, Maryland.

# Borden Institute - TMM

## ***Anesthesia and Perioperative Care of the Combat Casualty*** 1995



# Borden Institute - TMM

## *War Psychiatry*

1995

### WAR PSYCHIATRY

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1995



Soo Suk Kim

War

1966

Soo Suk Kim, a 22-year-old art student, painted *War* in 1966 as a gift to his brother-in-law, Captain Franklin D. Jones, who was serving as a division psychiatrist in Vietnam. Soo Kim had experienced war first-hand as a 6-year-old refugee during the North Korean occupation of Seoul, hiding from a communist edict calling for the execution of his prominent family. The painting depicts his childhood recollection of the horrors and chaos of war.

# Borden Institute - TMM

## ***Medical Aspects of Chemical and Biological Warfare*** 1997

### MEDICAL ASPECTS OF CHEMICAL AND BIOLOGICAL WARFARE

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1997



.....  
Gas! Gas! Quick, boys!—An ecstasy of fumbling,  
Fitting the clumsy helmets just in time;  
But someone still was yelling out and stumbling  
And flound'ring like a man in fire or lime ...  
Dim, through the misty panes and thick green light,  
As under a green sea, I saw him drowning.  
In all my dreams, before my helpless sight,  
He plunges at me, guttering, choking, drowning.<sup>1</sup>  
.....

—Wilfred Owen

The poetry, excerpted from *Dulce et Decorum Est*, was written by Lieutenant Wilfred Owen of the Royal Army, who was killed in action in France on 4 November 1918.

"Gassed," the frontispiece painting, shows the horror of chemical warfare in World War I as perceived by the artist, Gilbert Rogers.<sup>2</sup> As Keegan and Darzacott observed, "Rogers was an officer of the Royal Army Medical Corps commissioned to record medical work during the First World War. The subtitle to this painting, 'In Arduis Fidelis' (Faithful in Hardships), suggests the subject is a stretcher-bearer who has succumbed to gas while transporting wounded."<sup>3</sup>

1. Excerpted from Wilfred Owen, *Dulce et decorum est*. In: *The Collected Poems of Wilfred Owen*. Copyright © 1963 by Chatto & Windus, Ltd. Reprinted by permission of New Directions Publishing, New York, NY.  
2. Painting. Printed with permission from Imperial War Museum, London, England.  
3. Keegan J, Darzacott J. *The Nature of War*. New York, NY: Holt, Rinehart and Winston; 1981: 222.



# Borden Institute - TMM

## *Rehabilitation of the Injured Combatant, Vols 1 & 2*

1998 &  
1999

### REHABILITATION OF THE INJURED COMBATANT VOLUME 1

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1998



*Exercise Period for Wounded*

Artist: Marion Greenwood

ca. 1945

Art: Courtesy of US Center of Military History, Washington, DC.

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Uniformed Services University of the Health Sciences  
Bethesda, Maryland  
1999

# Borden Institute - TMM

## ***Medical Aspects of Harsh Environments, Vols 1 & 2***

2001 &  
2002

### **MEDICAL ASPECTS OF HARSH ENVIRONMENTS VOLUME 1**

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2001



The environments that face combatants on modern battlefields.

Art: Courtesy of US Army Research Institute of Environmental Medicine, Natick, Massachusetts

### **MEDICAL ASPECTS OF HARSH ENVIRONMENTS VOLUME 2**

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2002



# Borden Institute - TMM

## Ophthalmic Care of the Combat Casualty

2003

### OPHTHALMIC CARE OF THE COMBAT CASUALTY

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2003



Joseph Hirsch

High Visibility Wrap

Watercolor on Paper, 1944

Although the formidable dressing seen here conceals a wound of the right globe and orbit, it cannot hide the indomitable spirit of this wounded American soldier. One wonders, however, to what extent artistic license was exercised in illustrating this elaborate and robust dressing, which would almost certainly have had a deleterious effect on intraocular pressure. The watercolor first appeared as the frontispiece to Volume 1 of *Neurosurgery in the Surgery in World War II* series, part of the official history of the Medical Department, US Army. We are pleased to reproduce the painting here, as its inclusion symbolizes the continuity between the current Textbooks of Military Medicine series and our illustrious predecessor. First printed in Spurling GR, Woodhall B, eds. *Neurosurgery*, Vol 1. In: Hays SB, Coates JB Jr, eds. *Surgery in World War II*. Washington, DC: Department of the Army, Medical Department, Office of The Surgeon General; 1958: frontispiece. Watercolor: Reproduced courtesy of Army Art Collection, US Army Center of Military History, Washington, DC.

# Borden Institute - TMM

## ***Military Preventive Medicine: Mobilization and Deployment, Vol 1*** 2003

### **MILITARY PREVENTIVE MEDICINE MOBILIZATION AND DEPLOYMENT Volume 1**

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2003



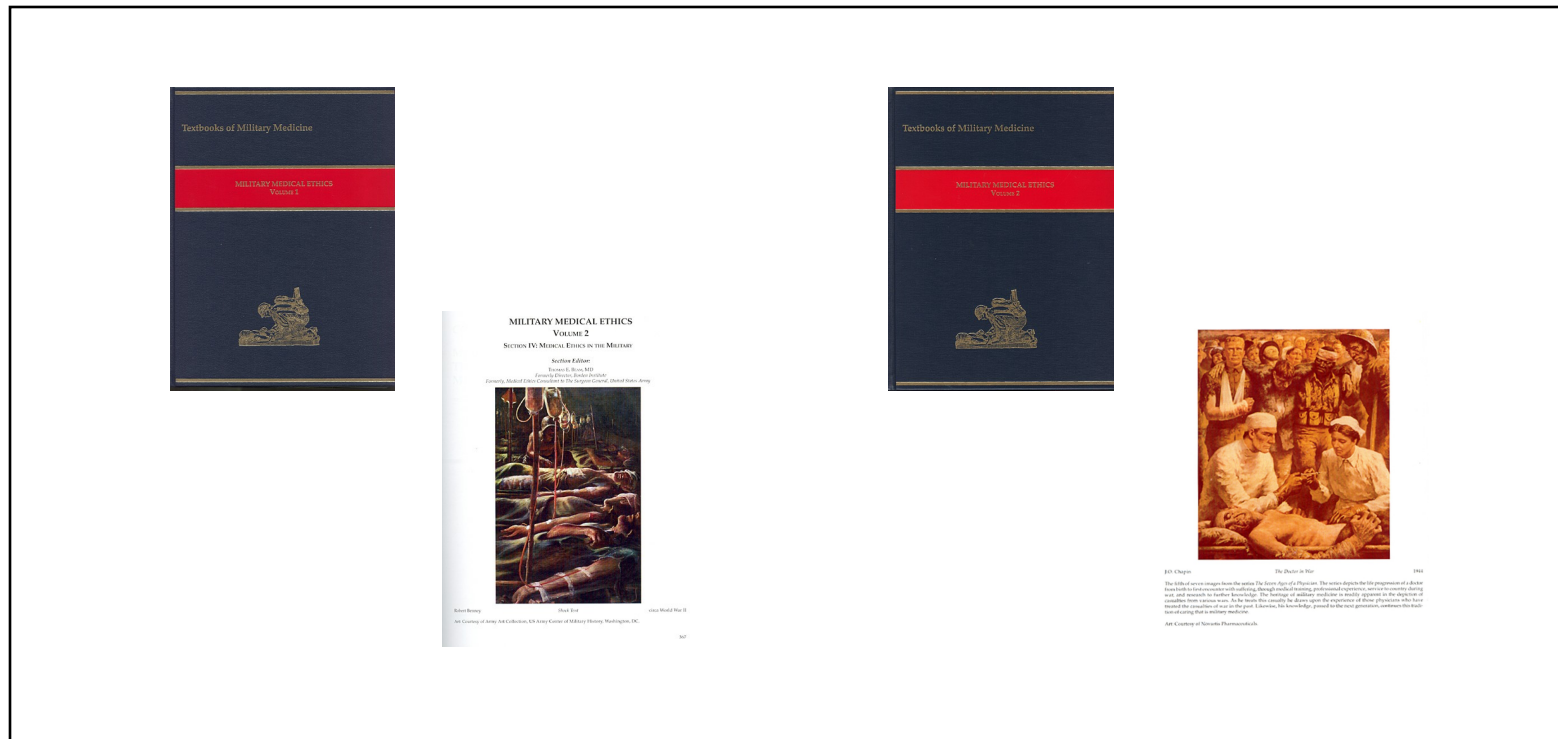
Deploying a healthy force at any time to any part of the world requires comprehensive and coordinated preventive medicine services. The challenges and the achievements of military preventive medicine in the US Armed Forces are embodied by these soldiers crossing a river in Haiti in 1995. They represent a carefully screened cadre of young Americans who enter military service and benefit from a scientifically sound program to reduce the threat of infectious diseases and injuries during basic training and deployment. When deployed to a harsh environment such as this one, they are prepared for potential hazardous exposures—infectious diseases, climatic extremes, chemical and nuclear exposures, and mental stressors—by military preventive medicine professionals. Military medical research and development provides their commanders with effective countermeasures. Their health is monitored to detect events that threaten individual health and operational effectiveness both in the field and in garrison. Military preventive medicine has always been a fundamental factor for ensuring operational success, but as US military doctrine shifts to emphasize rapid and relatively smaller deployments of forces accompanied by small medical elements, the preventive medicine mission takes on a new urgency.

Department of Defense photograph. DoD Joint Combat Camera Center Reference Number -SPT-95-000922.  
Photographer: SPC Kyle Davis, US Army

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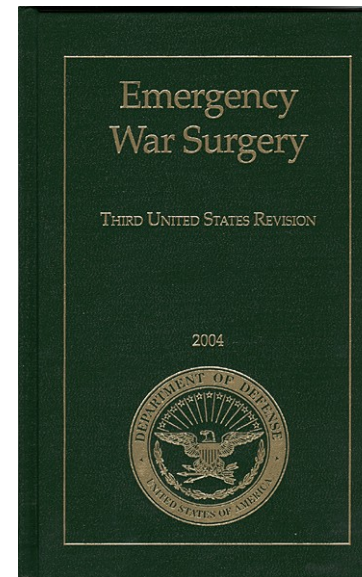
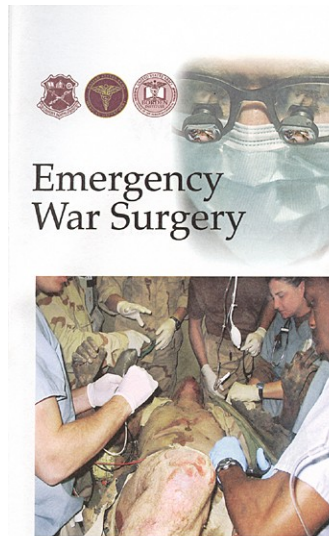
## *Military Medical Ethics, Vols 1 & 2*

2003



# Borden Institute - TMM

## ***Emergency War Surgery Handbook, Third United States Revision (CD for 2004 available)***





# Borden Institute - Specialty Publications



## ***Battlefield Surgery 101: From The Civil War to Vietnam*** 2004

### **BATTLEFIELD SURGERY 101: From the Civil War to Vietnam**

#### Part 1

##### **Patient Flow in a Theater of Operations**

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#### Part 2

##### **Twentieth Century Warfare and the Evolution of American Battlefield Surgery**

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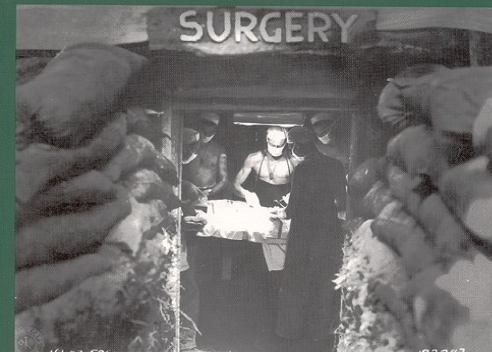
#### Part 3

##### **Selected Photographs From**

##### **BATTLEFIELD SURGERY 101: From the Civil War to Vietnam**

Based on the Exhibit by J. T. H. Connor, Michael G. Rhode, and J. Carey Crane

### **BATTLEFIELD SURGERY 101: FROM THE CIVIL WAR TO VIETNAM**



Essays on Military Medicine and Surgery

and

Selected Photographs From the Exhibit

Catalogue in Support of the Exhibit at the National Museum of Health and Medicine, Washington, DC.

***A collaborative effort of the Borden Institute and the  
National Museum of Health and Medicine of the Armed  
Forces Institute of Pathology***



# Borden Institute - TMM

## ***Urology In The Vietnam War: Casualty Management and Lessons Learned***

2005

**UROLOGY IN  
THE VIETNAM WAR:  
CASUALTY MANAGEMENT  
AND LESSONS LEARNED**

by

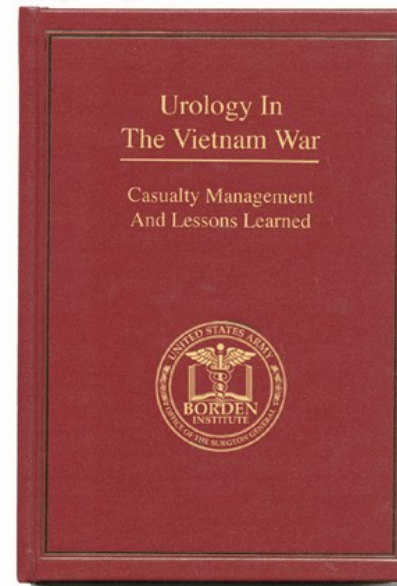
JOHN N. WETTLAUER, COLONEL, MEDICAL CORPS,  
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BORDEN INSTITUTE  
UNITED STATES ARMY MEDICAL DEPARTMENT  
WASHINGTON, DC

2005







# Borden Institute - TMM series

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□ TMM books are available complimentary to qualified US military medical personnel.





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